WHAT IS CLAIMED IS:

1. A method for producing an optical recording medium comprising a plurality of recording layers on a disc-shaped substrate on which information can be recorded holographically, and intermediate layers provided between the recording layers, the method comprising:

applying a first coating solution containing a photo-isomerizable component, which records information holographically by photo-isomerization onto a surface of one of the substrate or the intermediate layer, which is being held horizontally;

allowing the coating solution to flow toward a periphery of the substrate by a centrifugal force generated by rotating the substrate while a film is dried, to provide the recording layer;

applying a second coating solution containing a photo-isomerizable component that can be isomerized by radiation having the same wavelength as radiation used for isomerizing a photo-isomerizable component contained in the recording layer and incapable of dissolving the recording layer, to a surface of the recording layer; and

allowing the second coating solution to flow toward the periphery of the substrate by a centrifugal force generated by rotating the substrate while a film is dried, to provide an intermediate layer that cannot be dissolved by the first coating

solution.

2. A method for producing an optical recording medium according to claim 1, wherein each of the recording layers contain photo-isomerizable components that can be isomerized by radiation having a same wavelength.

3. A method for producing an optical recording medium according to claim 1, wherein a thickness of the intermediate layer is thinner than a thickness of the recording layer.

4. A method for producing an optical recording medium according to claim 1, wherein a thickness of the intermediate layer is no more than 1/4 of an incident wavelength λ.

5. A method for producing an optical recording medium according to claim 1, wherein a viscosity of the first coating solution is higher than a viscosity of the second coating solution.

6. A method for producing an optical recording medium according to claim 1, wherein the photo-isomerizable component is a polymer component containing a photo-isomerizable organic atomic group or a polymer component in which photo-isomerizable organic molecules are dispersed.

7. A method for producing an optical recording medium according to claim 6, wherein the photo-isomerizable organic atomic group or the photo-isomerizable organic molecules are azobenzene.

8. A method for producing an optical recording medium according to claim 1, wherein a laminated film constituted by the recording layers and the intermediate layers has a thickness of at least 10 μm.

9. An optical recording medium comprising a plurality of recording layers on which information can be recorded holographically on a disc-shaped substrate, wherein

the recording layers each contain photo-isomerizable components that record holograms through photo-isomerization, and

intermediate layers, each of which contains photo-isomerizable components that can be isomerized by radiation having a same wavelength as radiation used for isomerizing the photo-isomerizable component contained in the recording layer and is composed of a material that can be one of dissolved or dispersed in a solvent that does not dissolve the recording layer,

are laminated alternately in the optical recording medium.

10. An optical recording medium according to claim 9,

wherein the recording layer is composed of a water-insoluble material and the intermediate layer is composed of a material that cannot be dissolved in water.

11. An optical recording medium according to claim 9, wherein the recording layers contain photo-isomerizable components that can be isomerized by radiation having the same wavelength.

12. An optical recording medium according to claim 9, wherein a thickness of the intermediate layer is thinner than the thickness of the recording layer.

13. An optical recording medium according to claim 9, wherein a thickness of the intermediate layer is no more than 1/4 of an incident wavelength λ.

14. An optical recording medium according to claim 9, wherein the photo-isomerizable component is a polymer component containing a photo-isomerizable organic atomic group or a polymer component in which photo-isomerizable organic molecules are dispersed.

15. An optical recording medium according to claim 14, wherein the photo-isomerizable organic atomic group or the

photo-isomerizable organic molecules are azobenzene.

16. An optical recording medium according to claim 9, wherein a laminated film constituted by the recording layers and the intermediate layers has a thickness of at least 10 μm.